REMARKS

This is in response to the Office Action dated November 19, 2010. Claims 1-23 are pending and stand rejected in the outstanding Office Action. No claims have amended in the present Reply.

Applicant thanks the Examiner for consideration of the Information Disclosure Statements filed July 11, 2006, March 6, 2008, June 23, 2010, July 15, 2010 and August 17, 2010.

The Examiner's acknowledgment of the application's claim to foreign priority and receipt of a certified copy of the priority document is appreciated.

The rejection of independent claims 1, 4-5 and 15 as allegedly being unpatentable under 35 U.S.C. § 103(a) over Yamaguchi et al. (US 6,266,109) in view of Nakamura (US 7,091937), is respectfully traversed. In order to establish a prima facie case of obviousness, all of the claim limitations must be taught or suggested by the prior art.

Regarding claims 1, 4-5 and 15, the Examiner stated that Yamaguchi discloses all the limitations of the claims, including different voltages being applied to the display elements so as to display the colors required to produce a color image display, except for teaching that different voltages being applied to the display element so as to display the colors required to produce a color image display with identical gradation, so that two different voltages produce the same gradation to correct a wavelength dispersion of the optical anisotropy of the medium, and turned to Nakamura for the missing limitation.

Nakamura discloses a display device (Fig. 1) having display pixels comprising organic electroluminescence (EL) elements emitting light in red, green or blue. In an array of EL elements 16, each EL element comprises a thin film of a red, green or blue fluorescent organic

compound held between a two electrodes, so that electrons and holes are supplied and recombined in the luminescent layer to produce excitons and provide light radiation upon deactivation of the excitons (col. 4, lines 18-58).

In one embodiment, a plurality of signal voltages from a common group of gradation reference voltages is applied to red and blue EL elements and a plurality of signal voltages from a group of gradation reference voltages is applied to the green EL elements. The reference voltages of the gradation reference voltage groups for red and blue and for green are properly determined to perform gamma correction to eliminate the distortion of the white balance in the picture and gradation between the organic EL elements 16, col. 12, lines 27-52.

According to the Examiner, it would have been obvious to one of ordinary skill in the art to modify the image display device of Yamaguchi (by applying voltages so that two different voltages produce colors of identical gradation) "to correct a wavelength dispersion of said optical anisotropy of the medium, as taught by Nakamura", so that "to eliminate gradation distortion caused by the luminance efficiency and characteristics that differ between display elements of differing color", citing col. 1, lines 55-63 in Nakamura, see p. 4 of the Office Action.

Nakamura is concerned with finding appropriate values for the reference voltages applied to the color EL elements so that gamma correction is performed, see col. 12, lines 47-51. However, the problem addressed by the gamma correction in color displays is completely different from the problem of the wavelength dispersion of the optical anisotropy of an optical material such as a liquid crystal material, which is addressed in the claimed invention. Whereas, gamma correction compensates for the non-linear relationship between the input video signal and the generated light intensity, the claimed invention corrects for the inherent dependence of the optical anisotropy in an optical material on the wavelength.

In other words, since Nakamura discloses a method for solving a problem (i.e., performing gamma correction to *eliminate the distortion of white balance*) which is completely different from the problem that is solved in the invention of claims 1, 4-5 and 15, i.e., "different voltages being applied to the display elements so as to display the colors required to produce a color image display with an identical gradation…to *correct for wavelength dispersion of said optical anisotropy of the medium*", one of ordinary skill in the art would not have looked into Nakamura to modify the invention of Yamaguchi so that the problem addressed by the invention of claims 1, 4-5 and 15, is solved.

Moreover, Nakamura merely teaches a certain configuration for applying reference signal voltages to red/blue and green EL elements (e.g., applying voltages to the red and blue elements from a common voltage generator 20RB, and applying voltages to the green elements from a different voltage generator 20G, see Fig. 11). One of ordinary skill in the art would not know how exactly to produce different reference voltage values between the RGB colors so "to correct for wavelength dispersion of said optical anisotropy of the medium". In the invention of claims 1, 4-5 and 15, this is done by preparing appropriate voltage vs. transmittance curves like those shown in Figs. 10(a) and 10(b) of the instant specification. This is not taught by Nakamura, and it is completely absent in Yamaguchi.

In addition, unlike the Examiner's assertion, Nakamura does not teach applying different voltages so that the colors produced by different applied voltages have identical gradation. Instead, Nakamura teaches applying different voltages so that gamma correction is performed (so that the transfer function becomes linear). This is different from different colors having identical gradation.

In the invention of claims 1, 4-5 and 15, colors are required to produce a color image display with and identical gradation. Therefore, in order to limit the phenomenon of "color discrepancies" in which the colors are not accurately displayed, different voltages are applied to the display elements, so that these identical gradations are achieved. This ensures that voltages can be applied to the display elements in accordance with the wavelength dispersion characteristics of optical anisotropy (see, for example, p. 6, lines 18-25 in the specification).

However, as mentioned above, the technical problem solved in Nakamura is completely different from that of the invention of claims 1, 4-5 and 15. While the invention of claims 1, 4-5 and 15 is concerned with applying voltage in accordance with wavelength dispersion characteristics of optical anisotropy, Nakamura is concerned with providing a display device in which quality is enhanced without requiring a considerable increase in the scale of circuitry (Nakamura, col. 2, lines 3-6). This is achieved by converting gradation data to gradation voltage groups assigned to each color (red, blue and green) and applying individual gamma correction with respect to different luminous characteristics in this conversion (Nakamura, col. 8, lines 21-30).

Nakamura does not specifically disclose that a first and a second voltage have the same gradation. Nakamura only discloses that a gradation reference voltage group can be used in common for red, green and blue of a luminescent material that have substantially the same gamma characteristics (Nakamura, col. 12, lines 27-30). While the gamma characteristics may be the same between the different voltages used, this does not provide any indication to someone of ordinary skill in the art that the voltages must also have a same gradation.

Therefore, one of ordinary skill in the art would not have any motivation to combine Nakamura and Yamaguchi in order to arrive at the invention of claims 1, 4-5 and 15.

Yoo et al. (US 6,636,289), cited for the limitation of the medium exhibiting optical anisotropy in absence of an electric field and exhibiting optical anisotropy under applied voltage, does not cure the above deficiencies of Yamaguchi and Nakamura.

For the above reasons, claims 1, 4-5 and 15 are allowable.

It is respectfully requested that the rejection of claims 2-3, 6-14 and 16-23 each being dependent from claim 1, 4, 5, or 15, also be withdrawn.

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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